

AUSA 2015: US Army's next-generation 120 mm tank cartridge moves to full production

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The US Army has given type classification approval for the 120 mm M829A4 next-generation Advanced Kinetic Energy tank cartridge, which is to replace the previous A3 variant.

"We passed our first production lot acceptance test under low-rate initial production and expect to be in full production by the beginning of 2016," said Jarrod Krull, a spokesman for Orbital ATK Armament Solutions, which produces the round.

The company in June announced it had received its first full-rate production contract for USD26 million that is expected to be exercised later this year, Krull told *IHS Jane's* in the run-up to AUSA 2015. That contract covers a first year of production and options for two follow-on years - if all options are exercised production would total about USD80 million.

The round is designed to penetrate and defeat all types of armour, including high-explosive reactive armour, Krull added.

The A4 variant is the fifth-generation of the army's armour-piercing fin-stabilised, discarding sabot with tracer (APFSDS-T) cartridge, and it incorporates a "long-rod penetrator and proprietary, three-petal, advanced composite sabot that facilitates the most efficient transfer of energy to maximise the rod's penetrating power", Orbital ATK said in a statement.

"The cartridge also uses an advanced propellant blend that maintains a consistent muzzle velocity across operational temperatures ranging from extreme cold to extreme hot," the company said. "Additionally, the round's advanced combustible cartridge case incorporates a relocated skive joint placement that improves crew safety during handling."

COMMENT

The APFSDS-T round uses a depleted uranium (DU) penetrator and incorporates an ammunition datalink for use with future gun variants, and potential upgrade developments are important because army budget materials assume the 120 mm Abrams gun "will remain in the bulk of the tank inventory until year 2050". To this end, the army is considering an alternative penetrator effort for designs made of non-DU materials. One is to be a 'drop-in' design that retains the geometry and function of the DU penetrator, and the other will be optimised for the new material.